Article

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Relationship Between Self-Concept and Parent–Adolescent Relationship Among Higher Secondary Students: Moderating Roles of Teacher–Student Relationship and Academic Achievement

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Abstract

This research aimed to find the moderating roles of teacher-student relationship and academic achievement in the association between self-concept and parent-adolescent relationship. This study included students of grade11, grade 12 and equivalent, ageing from 15 years to 19 years. A sample size of 270 was used and data was collected from different colleges by convenience sampling technique. Quantitative Correlational Survey research design was used to collect data. The survey consisted of consent and demographic forms followed by Adolescents' Self-Concept Short Scale, Parent-Adolescent Relationship Scale and Student-Teacher Relationship Survey. Students' academic achievement was measured by the percentage of marks they scored in exams. Data was analyzed using Regression Analysis and Moderation Analysis on IBM SPSS Statistics 21. The findings showed that there is a significant association between parent-adolescent relationship and self-concept. It was further revealed that the teacher-student relationship moderates the relation of parent-adolescent relationship and adolescents' self-concept. However, academic achievement did not moderate the association between parent-adolescent relationship and self-concept. The findings may contribute to the Educational Psychology field by highlighting the important aspects that influence self-concept of students.

Keywords: Academic achievement, Parent-adolescent relationship , Parent-teacher relationship, Self-concept, Quantitative Correlational survey

Introduction

Self-concept revolves around the core questions of identity, belonging, and one's place within a social context (Mittal et al., 2022). A person's psychological state is greatly influenced by their self-concept. In certain contexts, it is a crucial cognitive idea and memory structure (Yunus et al., 2011). According to research, one's self-concept is a social force that affects one's own behavior, perceptions, and reactions as well as those of others (Grosz et al., 2024; Tus, 2020). When people notice significant behavioral changes, such as when they look in the mirror, consider joining a group, or even just when they are wearing a bathing suit, it is considered that their self-concept is functioning (Delgado et al., 2022; Ma et al., 2021; Tamm et al., 2024). Motivation, emotion control, and self-relevant thinking are other instances of self-in-action (Crocetti et al., 2023; Denessen et al., 2020; Wu et al., 2021). Self-concept, according to some psychologists, is more than just a hypothesis about oneself.

According to Moyano et al. (2020) self-concept develops with interactions with other people such as parents and teachers. Teachers' and parental beliefs are allied with formation of self-concept of ability in children (Bohlmann & Weinstein, 2013; Lee et al., 2022; Vasalampi et al., 2020; Zuo et al., 2024). Students' achievement related perception is also associated with their parents. This may be elucidated by the expectancy value model. According to this model, students' perceptions related to academics may be elucidated by two mechanisms; first, parental beliefs and expectations directly influence the children by inspiring them to improve in school and providing them with positive feedback when they perform better. Second, they can communicate their beliefs indirectly through actions such as helping students with their schoolwork (Pesu et al., 2016). It is reported that self-concept of children regarding their ability is positively linked to parent's beliefs among sixth grade students (Castro et al., 2015).

Like parents, teachers also have a similar influence on the formation of self-concept. A longitudinal study by Leflot et al. (2010) conducted on seven-year-olds found that teacher behaviors such as providing autonomy support and active involvement are in the positive relation with children's social self-concept, while structured control shows a negative relationship. According to Castro et al. (2015), pupils' strong sense of belonging was made possible by their perceptions of their instructors' support. Additionally, it made it possible for them to succeed

academically. According to Painter et al. (2025), a teacher's capacity to build a loving and supportive relationship is indispensable to create a sympathetic learning environment and raise student accomplishment. Positive and bad school climates were contrasted by Aparício et al. (2020). They discovered that in a healthy school climate, there was little chance of maladaptive behaviors. Conversely, students who experienced a bad school atmosphere felt rejected because they believed that there was no justice in the classroom and that discipline was administered unfairly.

Previous empirical researches have documented the influence of parent-adolescent relationship on the academic achievement of children (Painter et al., 2025; Sengsavang, & Krettenauer, 2015). According to Liu (2024) parental involvement at early stage in child's learning leads to greater school performance including academic achievement. Harris and Orth's (2020) review showed that families whose children exhibit greater school achievement have an established routine in which they have a specific time to study, parents monitor out-school activities, and parents encourage their children's progress and development in school. Ramanlingam and Maniam (2020) explored the parents' role in the academic performance on elementary pupils. Their study suggests that effect of parental involvement comes from the educational aspirations and parental values which are exhibited through positive parental styles and parental enthusiasm. These are then perceived and internalized by the student. This impacts self-perception of students being learners and influences their level of motivation, educational aspirations, and self-esteem. This course frames the way students perceive education and increases their motivation to do well.

The association between academic performance and self-concept has been a question of scholarly attention for decades. Early research highlighted a consistent link between students' academic self-concept and their academic outcomes (Möller et al., 2020; Van Goozen et al., 2022). Subsequent studies further confirmed that academic achievement and self-concept are significantly related (Bala, 2014; Sanders, 2013) with stronger self-concept often corresponding to higher test performance (Preckel et al., 2013). It is also suggested that academic outcomes may serve as predictors of students' self-concept. Marginson (2024) argued that self-concept is shaped by academic achievement through reflected appraisal, whereby individuals internalize evaluations made by significant others.

For many years, the relationship between academic achievement and self-concept has been studied. Existing research shows a persistent correlation between academic achievement and academic self-concept. (Möller et al., 2020; Lauermann et al., 2020). Better self-concept is linked with better scores in scholastic test and a noteworthy relationship exists between academic achievement and self-concept. It is likely that academic achievement predicts self-concept in students. As stated by Marginson (2024), based on principle of reflected appraisal, one may predict that academic achievement will impact self-concept because of evaluation by significant others.

Rationale and Significance

Self-concept has an enormous impact on the overall human psychology. It influences how we see ourselves, think, form relationships, make major decisions about life, etc. Self-concept is largely influenced by our surroundings, especially our parents who play a major role in developing it. Healthy parent-child relationships develop healthy self-concept and adverse parent-child relation form adverse self-concept. In addition, teachers also influence self-concept. Their words and actions affect self-concept. It is likely that students' good self-concept is reinforced by their teacher and vice versa. Similarly, students evaluate themselves by their academic achievements. Academic achievement shapes how students see themselves. High achievers are likely to be more confident. In Pakistani society, high academic achievement improves social standings of students and is assumed to be a guarantee of successful future. Moreover, most of the research on self-concept is on children and does not address adolescents. Adolescence is a transitionary period between childhood and adulthood in which individuals are questioning many things about themselves and their surroundings. Hence, it is important to study one's own self-concept and its influencing factors. It is likely that these concepts will be internalized by them throughout rest of their lives.

This study is important since limited research has been conducted in this area. Not much research addresses all four variables together and hardly any study has shown the moderating role of academic achievement and teacher-student relationship together. This study is a significant contributor to the field of educational psychology as it can shed light on the important role of teachers and academic achievement on self-concept. This may provide useful insights for educationists, teachers, and educational psychologists to help them adopt positive

parental relationships, teaching practices, and develop better evaluation techniques for students rather than just focusing on grades and percentages. The purpose of this study was to find the moderating roles of teacher-student relationship and academic achievement in the association between self-concept and parent-adolescent relationships.

Research Question

1. What is the relationship between Parent-Adolescent relationship and self-concept?
2. What is the relationship between student teacher relationship and academic achievement?
3. How does academic achievement moderate the relationship between parent-adolescent relationship and self-concept?
4. How does student-teacher relationship moderate the association between self-concept and parent-adolescent relationship?

Research Hypotheses

H1: There is a significant relationship between parent-adolescent relationship and self-concept.
H2: There is a significant relationship between academic achievement and teacher-student relationship.
H3: Academic achievement moderates the relationship between self-concept and parent-adolescent relationship.
H4: Student-teacher's relationship moderates the relationship between self-concept and parent-child relationship.

Literature Review

Concept and Development of Self-Concept

Self-concept refers to the way an individual perceives and defines themselves. It encompasses the personal beliefs, attitudes, and impressions that a person develops about their own identity. Tamm et al. (2024) describes it as the mental image we hold of ourselves, shaped through interactions with significant figures in our lives. It reflects how we interpret our abilities, behaviors, and distinctive traits that may

include personal statements such as “I am a kind person” or “I am a good man.” According to Tus (2020), self-concept involves learned perceptions and evaluations of oneself, while some scholars view it as a reference framework through which a person interprets information about their own identity. Bala (2014) further defines it as a collection of attributes, values, strengths, weaknesses, and relationships that a person considers integral to their sense of self.

The development of self is connected to the pursuit of competence and the ability to navigate conflicts across different life stages (Brown, 1998). Early life experiences and interpersonal relationships play a crucial role in shaping this self-view (Delgado et al., 2022; Denessen et al., 2020).

Parental Influence on Self-Concept and Moral Development

Research consistently shows that parental support fosters positive self-regard, which in turn is linked to higher academic performance (Jeynes, 2024; Jiun yu et al., 2010; Barreto-Zarza et al., 2021). Spelke’s (2023) work highlights that consistent caregiving in childhood may encourage the early formation of moral values. Likewise, young children’s close relational experiences strongly influence their self-perceptions and their willingness to help others. Further evidence by Sengsavang and Krettenauer (2015) demonstrates that strong, positive parent–child relationships are related to a heightened moral self-concept. Therefore, the quality of family relationships shapes an individual’s moral understanding in addition to affecting broader dimensions of their self-concept.

Teacher Expectations and Self-Concept of Students

Beliefs and expectations of teachers, alongside those of parents, play a significant role in shaping self-perception among students. Studies have revealed that the expectations teachers regarding ability impacts students’ self-concept in areas like mathematics and reading (Szumowska et al., 2023; van IJzendoorn et al., 2020). Positive expectations, as found by Szumowska et al. (2023), can lead to more positive self-perceptions in mathematics. Research also suggests that, for third and fourth grade children, teacher evaluation may have a sturdier effect on general self-concept than those of parents (Habók et al., 2020). Close teacher–student relationships are related to higher engagement, academic interest, self-efficacy, and motivation in comparison to distant ones (Fast et al., 2010; Sakiz et

al., 2012; Tosto et al., 2016 ;Wentzel et al., 2010). Supportive, affectionate, and emotionally available teachers help children develop positive self-evaluations, while neglectful or punitive teachers contribute to negative self-image (Harris, & Orth, 2020). Positive teacher–student interactions have been linked to more positive self-perceptions (Liu, 2024). Longitudinal findings show that such support predicts better academic and social self-concept (Leflot et al., 2010). Multiple cross-sectional studies echo these links, particularly for academic and global self-concept (Aparício et al., 2020; Cocoradă et al., 2021; Lu et al., 2023; Wang et al., 2024).

Parental Relationships and Academic Achievement

Parental relationships also influence achievement. Parents' beliefs about academic ability often align with self-concept of children in specific subjects (Arens et al., 2021; Gniewosz et al., 2011; Šimunović, & Babarović, 2020). Parent–child cohesion is associated with higher academic performance (Booth & Gerard, 2011; Jhang, 2017) and emotionally secure children tend to engage more in studies (Yuan et al., 2016). Conversely, low family cohesion has been linked to academic failure (Ibabe, 2016). When parents actively support learning, contribute to school activities, advocate for fair treatment, and engage in joint decision-making, students' performance improves (Ramanlingam, & Maniam, 2020).

Academic Achievement and Self-Concept

Across the literature, self-concept consistently appears as a strong predictor of academic achievement (Castro et al., 2015; Marsh et al., 2020). Experiences of success or failure shape pupils' self-concept (Brown, 2020) and it correlates positively with GPA (Haktanir et al., 2021), and. Research across different groups, such as African American students in historically Black and chiefly white colleges has demonstrated that academic self-concept may be formed by GPA or by faculty relationships, depending on the context (Huang, 2011). Studies also show links between general self-concept and academic success (Brandt et al., 2020; Jasmi, & Hin, 2014; Lauermann et al., 2020). Moreover, achievement differences relate to differences in self-concept (Möller et al., 2010). Adolescence is a crucial period for developing self-concept, which is shaped not only by parental influence but also by environmental factors and interactions with teachers. Both academic performance and the quality of teacher–student relationships can strengthen or weaken how students view themselves.

From the literature mentioned above, it can be deciphered that adolescence is a crucial point in the development of self-concept process. Self-concept is largely made up from the early interactions between adolescents and their parents, but it is also influenced by environment and interactions with other important people in an individual's life. In students, self-concept is affected by their academic achievement and the quality of relationship they have with their teachers. Moreover, academic achievement and teacher-student relationship can help students develop a good self-concept or make it worse.

Methodology

Research design

This study implemented a Correlational survey research design to investigate how self-concept relates to parent–adolescent relationships among higher secondary students, while also considering the moderating roles of teacher–student relationships and academic achievement. The design enabled the systematic gathering and statistical examination of numerical data to evaluate hypotheses and identify patterns of association. Data was collected through a structured survey questionnaire composed of closed-ended items, which was developed using established measurement scales and prior literature. To ensure clarity, relevance, and content validity, the tool was reviewed and refined with the assistance of subject experts.

Participants

Convenience sampling technique was used for a sample size n=270. Higher Secondary students were part of the study. Data was collected from different schools through survey questionnaires. The research included individuals aged between 15 to 19 years who were enrolled in college, from all socioeconomic backgrounds, and had both parents alive. The research did not include the participants who were homeschoolers, diagnosed with psychological disorder/s, and/or were residing in hostels.

Instruments

In this research, three standardized measures were utilized. The Adolescents' Self-Concept Short Scale developed by Veiga and Leite (2016) was employed as a condensed 30-item version of the PHCSS, designed to evaluate six domains:

behavior, anxiety, intellectual status, physical appearance, happiness, and popularity. Items are rated on a six-point Likert scale, with 19 of them requiring reverse scoring. Previous studies reported strong evidence of internal reliability and external validity for this tool. The Parent–Adolescent Relationship Scale (Burke et al., 2021) was also applied, comprising eight items; three tapping identifications with parents and five items were addressing the perceived parental support. Responses from the participants were taken on a five-point Likert scale, and a score above 24 suggests a positive relationship. The scale demonstrates satisfactory construct validity and acceptable reliability. Additionally, the Student–Teacher Relationship Survey (Wilkins, 2014) containing 55 items across seven domains was used, although only five subscales were relevant for the present study: being compassionate to students, respecting students, motivating students while addressing their interests, being accessible, and acknowledging students' feelings and viewpoints. These five subscales include a total of 21 items, with Cronbach's alpha values ranging between 0.74 and 0.94.

Data Analysis

The data gathered were analyzed utilizing SPSS software. Descriptive measures, including means, standard deviations, frequencies, and percentages, were computed to present both the demographic profile and the key study variables. For inferential analysis, regression along with moderation tests were applied to examine the association between self-concept and parent–adolescent relationships, and to assess the degree to which teacher–student relationships and academic achievement modify this link. A significance threshold of $p < 0.05$ were adopted for statistical testing.

Procedure

Permission to use the selected scales was first obtained by contacting their respective authors through email. Subsequently, visits were made to several colleges to secure formal approval for data collection via an official request letter. Before beginning the survey, every participant in the research was requested to read and sign informed consent, which provided a brief explanation of the study's aim. Additionally, the consent form provided the participants with an understanding of their right to withdraw at any stage without penalty. Participants then completed a demographic information sheet, which included a question on their grades or

percentage scores to assess academic achievement. Following this, they responded to the Adolescents' Self-Concept Short Scale, the Adolescent-Parent Relationship Scale, and the Student-Teacher Relationship Survey. The entire process took approximately 20 minutes to complete. Once the forms were filled out, they were collected for further analysis.

Ethical Considerations

Research ethics were kept in consideration while conducting this study. Permission to conduct the research was taken from the corresponding colleges. Informed consent was given to the participants in which they were informed about the nature of the research. Additionally, participants were free to terminate their participation in the research at any time. Participants were assisted if they faced any issue while filling in the survey questionnaire. Participant's personal information was kept confidential and not shared with anyone.

Results

The results were evaluated using Statistical Package for Social Sciences version 21.

Table 1 shows the frequencies and percentages of the demographic variables of the participants. The study sought to include a sample that accurately represented the overall population.

Table 1

Percentages and Frequencies of Demographic Variables of Participants (N = 270)

Variables		f (%)
Age	15	29 (10.7)
	16	51 (18.9)
	17	108 (40.0)
	18	62 (23.0)
	19	20 (7.4)
Gender	Male	105 (38.9)
	Female	165 (61.1)
	1st year	86 (31.9)
Class	2nd Year	89 (33.0)
	AS	39 (14.4)
	A2	56 (20.7)
	Science	229 (84.8)
Group	Commerce	17 (6.3)
	Humanities	10 (3.7)
	Others	14 (5.2)
	Gulistan-e-Jauhar	112 (41.5)
Area of residence	Malir	56 (20.7)
	Malir Cantt	29 (10.7)
	Gulshan-e-Iqbal	18 (6.7)
	Gulzar-e-hijri	14 (5.2)
	Others	41 (15.2)
	1	110 (40.7)
Birth order	2	67 (24.8)
	3	45 (16.7)
	4	29 (10.7)
	5	8 (3.0)
	6	5 (1.9)
	7	5 (1.9)
	13	1 (0.4)
	0	17 (6.3)
Number of siblings	1	30 (11.1)
	2	71 (26.3)
	3	67 (24.8)
	4	50 (18.5)
	5	19 (7.0)
	6	7 (2.6)
	7	4 (1.5)
	8	3 (1.1)
	9	1 (0.4)
	12	1 (0.4)

Note. f = Frequency, % = Percentage

Table 1, shows more female participants (n=165) than male participants (n=105). The participants from science and humanities group had the least number of participants. Moreover, most of the participants were 17 years old.

Table 2 denotes the mean, the standard deviation, Cronbach's alpha, reliability coefficient, kurtosis, skewness, and ranges (potential and actual) of the scales used.

Table 2

Descriptive Statistics and Reliability Coefficients (Alpha), along with Univariate Normality of the Study Variables (N = 270)

Variables	No. of items	α	Range		M	SD	Skewness	Kurtosis
			Actual	Potential				
PA	8	.79	4-32	0-32	22.9	5.8	-.90	.68
IP	3	.75	0-12	0-12	9.6	2.3	-1.3	1.9
PS	5	.69	0-20	0-20	13.2	4.1	-.59	-.13
SC	30	.83	66-173	30-180	117.0	19.5	-.06	.03
AN	5	.72	5-30	5-30	17.1	5.8	.13	-.55
PH	5	.67	6-30	5-30	20.6	5.0	-.26	-.25
BE	5	.56	7-29	5-30	19.3	4.4	-.27	-.26
POP	5	.52	7-30	5-30	20.0	4.6	-.39	-.35
HAP	5	.68	7-30	5-30	20.6	4.7	-.31	-.35
IS	5	.68	6-30	5-30	19.2	5.1	-.34	-.43
TSR	21	.88	21-117	21-126	73.0	21.3	-.07	-.58
MO	6	.70	6-35	6-36	19.5	7.2	.05	-.48
RES	4	.69	4-24	4-24	15.1	5.1	-.35	-.39
CO	3	.64	3-18	3-18	10.3	4.2	-.36	-.47
AS	4	.67	4-24	4-24	15.2	5.0	-.54	-.17
UO	4	.65	4-24	4-24	12.7	5.6	-.13	-.68

Note. PA = Parent adolescent relationship, IP = Identification with parent , PS = Perceived parental support , SC = Self-concept , AN = Anxiety , PH = Physical appearance , BE = Behavior , POP = Popularity, HAP = Happiness , IS = Intellectual status , TSR = Teacher student relationship , MO = Motivating students and attending to their personal interests , RES = Treating students with respect , CO = Being compassionate to students , AS = Being assessable to students , UO = Understanding and valuing student's opinions and feelings.

The table indicates that the alpha reliability of main scales i.e. arent-Adolescent Relationship Scale, Adolescents' Self-Concept Short Scale, and Teacher Student Relationship Survey are 0.79, 0.83 and 0.88, respectively. The reliability of all scales falls in the acceptable range. Similarly, the alpha reliabilities of all the subscales also fall in the acceptable range.

Table 3 includes the correlation between parent adolescent relationship, self-concept; teacher-student relationship and academic achievement. These findings provide the preliminary insight regarding the direction of association among the variables.

Table 3

Correlation between Parent Adolescent Relationship, Self-Concept, Teacher-Student Relationship and Academic Achievement (N = 270)

	PA	PI	PS	SC	AN	PH	BE	POP	HAP	IS	TSR	MO	RES	CO	AS	UO	AA
PA	-	.806**	.943**	.423**	.231**	.311**	.319**	.130*	.377**	.292**	.175**	.123*	.180**	.073	.144*	.157**	.271**
PI		-	.562**	.355**	.226**	.280**	.240**	.129*	.294**	.217**	.121*	.082	.178**	.042	.080	.090	.216**
PS			-	.390**	.195**	.277**	.310**	.108	.360**	.285**	176**	.126*	.151*	.078	.156*	.169**	.257**
SC				-	.663**	.636**	.553**	.621**	.701**	.722**	.275**	.289**	.175**	.145*	.175**	.246**	.218**
AN					-	.251**	.219**	.351**	.300**	.348**	.138*	.129*	.090	0.36	.146*	.115	.097
PH						-	.149*	.191**	.414**	.454**	.176**	.181**	.097	.126*	.117	.146*	.180**
BE							-	.301**	.295**	.295**	0.40	.100	.019	-.024	.010	.015	.064
POP								-	.341**	.284**	.178**	.166**	.115	.132*	.108	.162**	.017
HA									-	.414**	.235**	.219**	.175**	.134*	.111	.250*	.197**
IS										-	.299**	.331**	.181**	.161**	.173**	.265**	.284**
TSR											-	.790**	.802**	.760**	.735**	.813**	.208**
MO												-	.533**	.463**	.379**	.534**	.211**
RES													-	.576**	.530**	.537**	.166**
CO														-	.501**	.558**	.128*
AS															-	.542**	.102
UO																-	.180**
AA																	-

Note. SC = Self-concept, PA = Parent adolescent relationship, TSR = Teacher student relationship, PI = Identification with parent, PS = Perceived parental support, AA = Academic achievement, AN = Anxiety, HAP = Happiness, POP = Popularity, PH = Physical appearance, BE = Behavior, IS = Intellectual status, CO = Being Compassionate to Students, MO = Motivating Students and Attending to Their Personal Interests, AS = Being Accessible to Students, UO = Understanding and Valuing Students' Opinions and Feelings, RES = Treating Students with Respect. (*p<0.05, **p<0.01)

The results obtained indicate that the parent–adolescent relationship demonstrates a positive and moderate correlation with self-concept, which is also consistent with H1. The analysis also indicates a weak but statistically significant positive association between the parent–adolescent relationship and the teacher–student relationship. Similarly, a weak, yet significant positive link emerges between the parent–adolescent relationship and academic achievement.

Supporting H2, the teacher–student relationship demonstrates a weak, though significant, positive correlation with both academic achievement and self-concept. A comparable weak positive association is also identified between self-concept and academic achievement. In addition, the table highlights that the intellectual status subscale is significantly and positively related to the subscales of the teacher–student relationship. Intellectual status also shows significant positive associations with physical appearance and happiness.

Table 4 presents a simple linear regression to examine the parent-adolescent relationship's association with self-concept.

Table 4

Simple Linear Regression showing Parent Adolescent Relationship as Predictor of Self-Concept among 11 and 12 Grade Students (N = 270)

	SC						
						95% CI	
	R	**R^2**	**ΔR^2**	**β**	**P**	**LL**	**UL**
PA	.423	.179	.179	.423	.000	1.054	1.787

Note. β = Standardized beta, CI = Confidence Interval, UL = Upper limit, LL = Lower limit, R^2 = R-squared, ΔR^2 = Adjusted R-squared, SC = Self-concept, PA = Parent–adolescent relationship.

Table 4 shows that self-concept is significantly predicted by the parent–adolescent relationship. A predictive change of 17% in self-concept occurs with variation in the parent–adolescent relationship as the predictor variable which is also consistent with H1.

In table 5, the moderating role of academic achievement in the relationship between parent-adolescent relationship and self-concept is evaluated through regression.

Table 5

The Moderating Role of Academic Achievement in the Relationship between Parent Adolescent Relationship and Self-Concept (N = 270)

Predictor	β	P	ΔR^2	ΔF
Constant	62.18	.02		
PA	1.73	.17		
AA	.32	.37		
PA*AA	-.005	.74	.00	.10

Note. PA = Parent adolescent relationship, AA = Academic achievement, β = Standardized beta, ΔR^2 = Adjusted R-squared.

Table 5 supports H3, by illustrating that the parent–adolescent relationship does not have a significant influence on academic achievement. Consequently, academic achievement does not operate as a moderating variable in the association between parent–adolescent relationship and self-concept.

Figure 1

The Moderating Role of Academic Achievement in the Relationship between Parent Adolescent Relationship and Self-Concept (N = 270)

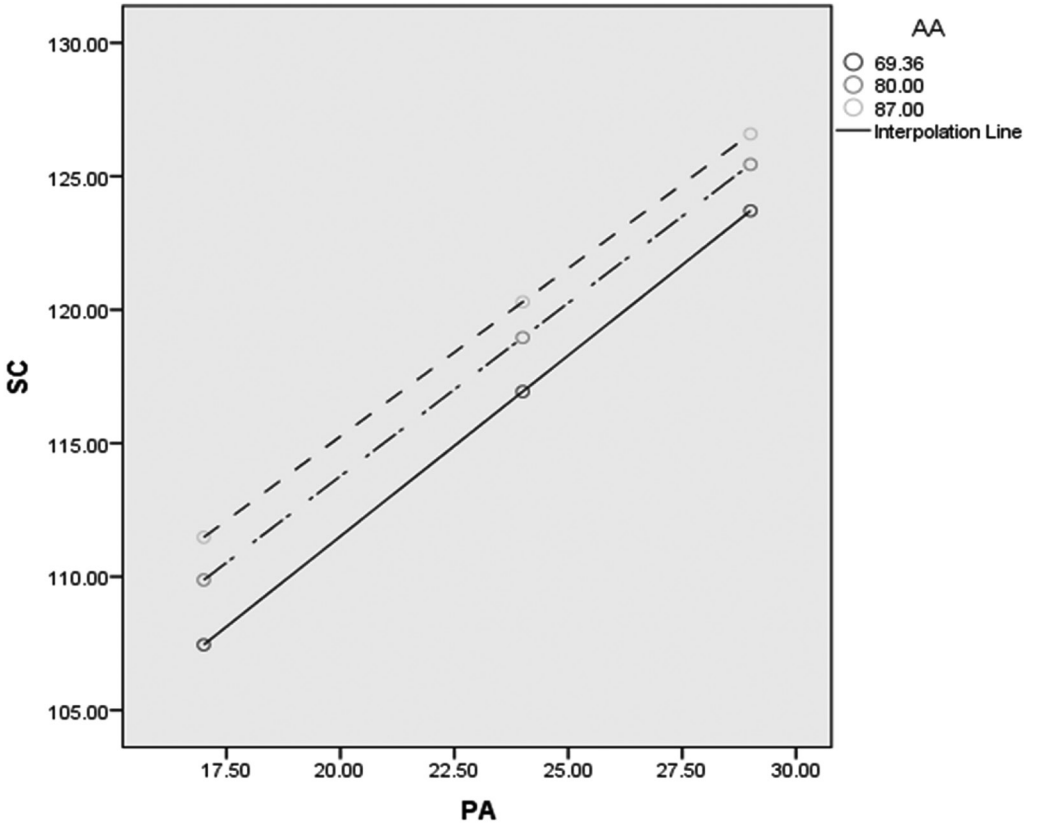

Figure 1 shows that there is no significant moderation as there is no interaction effect among the variables of parent adolescent relationship, academic achievement and self-concept.

In table 6, the moderating role of teacher-student relationship is evaluated in the relationship between parent-adolescent relations and self-concept.

Table 6

Moderating Role of Teacher Student Relationship in the Relationship between Parent Adolescent Relationship and Self-Concept (N = 270)

Predictor	β	P	ΔR^2	ΔF
Constant	40.68	.00		
PA	2.75	.00		
TSR	.63	.00		
PA*TSR	-.01	.01	.01	6.45

Note. PA = Parent adolescent relationship, TSR = Teacher student relationship, β = Standardized beta, ΔR^2= Adjusted R-squared.

Supporting H4, table 6 shows that the teacher–student relationship has a moderating role in the connection between parent–adolescent relationship and self-concept. Within this framework, the parent–adolescent relationship is identified as the predictor, whereas the teacher–student relationship acts as the moderator that shapes its impact on self-concept. The interaction between these variables confirms the existence of moderation effect.

Figure 2

Moderating Role of Teacher-Student Relationship in the Association between Parent Adolescent Relationship and Self-Concept (N = 270)

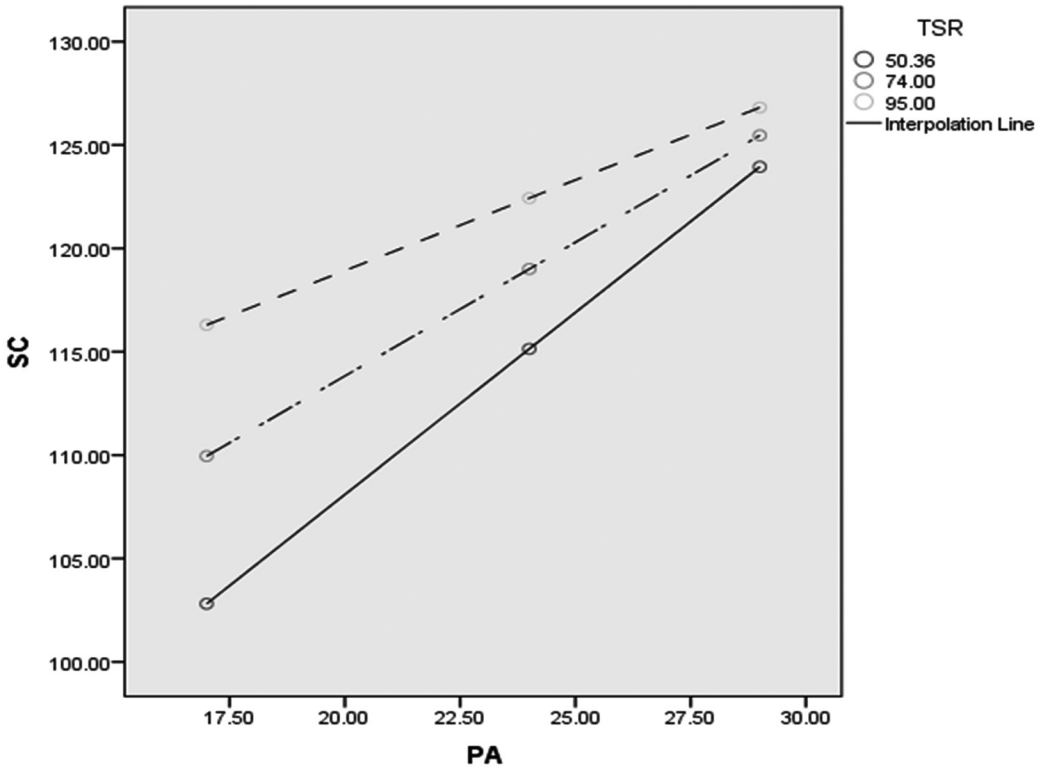

Figure 2 depicts that there is significant moderation as there is interaction among the variables of self-concept, parent-adolescent relationship and teacher-student relationship.

Discussion

The study proposed that there is a significant connection between parent–adolescent relationships and the self-concept of higher secondary students (Table 3 and 4). The results confirmed this expectation, demonstrating a clear and positive association between the two variables. Supporting evidence from earlier work also highlights this pattern. Álvarez et al. (2015) reported that different dimensions of family involvement were closely related to aspects of students' self-concept. Similarly, research has indicated that family support, whether directly or indirectly,

strengthens self-concept and contributes to academic achievement (Chohan & Khan, 2010). Huang et al. (2019) likewise found that among Chinese adolescents, stronger parent–child ties were positively associated with a healthier sense of self.

Research has revealed that environment and parental input shape one's abilities self-concept (Castro et al., 2015; Wu et al., 2021). Child self-concept of ability develops through two pathways, according to Castro et al. (2015). Initially, parents communicate to their child what they think they are good at, and then they give them learning opportunities. Children internalize this information into their self-concept. Pesu et al. (2016) discovered that parental beliefs at secondary school start influenced mathematical self-concept at end. The higher the parental belief at the outset of secondary school, the higher the self-concept of students regarding their math ability. The study also found that parents' beliefs affect adolescents' math self-concept. Therefore, parental guidance and family interventions can be helpful to enhance self-concept of adolescents.

The findings show that the quality of the teacher–student relationship is meaningfully associated with academic achievement of students. The findings, consistent with earlier research, confirmed the presence of a strong positive link between these variables (Table 3). For instance, Pandey and Thapa (2018) studied the influence of teachers on learners' academic performance and reported that teaching style and motivational approaches were positively correlated with student outcomes. They further observed that teacher encouragement was particularly associated with improved performance in mathematics, and that higher scores on teacher-related measures were linked to better overall academic results. Similarly, Raoof et al. (2024) noted that students who underperform often maintain negative relationships with their teachers. Hence, improving the teacher-student relationship through teacher training and sympathetic environment of classroom may enhance students' achievement in academic settings.

Huang et al. (2019) provided evidence that self-efficacy can perform as a bridge between teacher–student relationships and students' academic success. Their findings are consistent with H3, that when teachers engage with students in a positive way, learners' belief in their own abilities tends to grow, which in turn supports better academic outcomes (Table 5). Similarly, Yunus et al. (2011) explored this connection in English as a Second Language (ESL) classrooms and observed that

the quality of teacher–student interactions shaped not only achievement but also motivation. According to their study, students were more motivated to learn when they shared a close bond with their teachers, and this motivation helped promote stronger academic performance.

The study also explored whether academic achievement moderates the association between self-concept and parent–adolescent relationships. Opposing to prospects, the analysis discovered no moderating effect (Table 6). One possible explanation is that while academic achievement can impact the academic dimension of self-concept, it seems to have diminutive impact on other aspects, such as social or personal self-concept. This interpretation aligns with Herrera et al. (2020), who identified a positive relationship between academic achievement and academic self-concept, and with Preckel et al. (2013), who found a similar association but reported no link between academic achievement and social self-concept.

A possible explanation for the findings is that academic achievement may shape self-concept more strongly in early years than in later stages of development. Chen et al. (2013) reported that this influence declines with age, while Guo et al. (2022) recognized that self-concept of ability predicted achievement once it became stable, reducing the reverse effect. Research by Minarto et al. (2021) and Tamm et al. (2024) also supports the view that self-concept in late adolescence is relatively stable, especially in consistent environments.

The study further hypothesized that the relationship between teacher and student would moderate the link between self-concept and parent–adolescent relationship. Results supported this, echoing prior work showing that teachers communicate beliefs through praise and feedback (Wisniewski et al., 2020), which can strengthen students' subject-specific self-concepts (Denessen et al., 2020; Szumowska et al., 2023). Harris and Orth (2020) argued that caring and supportive teachers foster positive self-evaluations, while harsh or rejecting ones contribute to negative self-concept. Luo et al. (2021) similarly observed that positive teacher–student interactions reduced the negative effects of parental punishment on adolescents' self-concept. It is indicated in this study that fostering positive teacher-student interactions to support self-concept development.

A noteworthy correlation was also found between intellectual status and physical appearance. Past research and meta-analyses indicate a small but consistent positive association between attractiveness and intelligence (Grosz et al., 2024; Raible-Destan et al., 2022; Roorda et al., 2011). Status generalization theory (Grosz et al., 2024) and expectancy theory (Stephanou, & Athanasiadou, 2020) explain that attractiveness can generate performance expectations, which in turn shape self-concept. Evidence suggests that attractive individuals are often supposed as more intellectually competent (Westfall et al., 2020), with some studies finding stronger effects in men than women (Kanazawa, 2010).

Implications

The findings of this study reveal the influence of parent-adolescent relationships on self-concept. This means that good parent-adolescent relationships will lead to positive self-concept of students. The findings can be used to improve parental practices and emphasis the role of good parent-adolescent relationships to improve self-concept of students. Conversely, the results can also be used to improve teaching-student relationships which will lead to improvement in self-concept. Moreover, an association between the teacher-student relationship and academic achievement was found. This can be used to increase overall academic achievement of students by establishing good relations with their teachers.

Furthermore, the findings of this research also suggest that students who see themselves as having a good level of intellect had better relations with teachers. Findings of this study can be used to reduce this classroom biasness which likely occurs below a teacher's level of awareness.

Conclusion and Recommendations

Conclusively, the study points to a meaningful association between how adolescents relate to their parents and how they view themselves during the final years of secondary school. The results also suggest that when students experience supportive and positive interactions with teachers, their academic outcomes tend to improve. An additional aim was to test whether teacher–student relationships or academic performance could change the strength of the link between parent–adolescent relationships and self-concept. The findings showed that teacher–student relationships did play a moderating role, while academic achievement on its own

did not appear to alter this connection.

For future, it is recommended to conduct research on early adolescents, ninth, or tenth grade students to see if these findings apply to them or not. It is recommended to include students from backgrounds other than science. Moreover, coming researchers could try to collect academic achievement of students from school databases to have a better representation of their sample. To add equal representation, different board systems should be considered for inclusion in the research in case there are any substantial differences among them. For policy makers, it is recommended to develop programs for parents related to emotional support and open communication. Similarly, schools are recommended to include teachers' professional development training, foster mentoring and positive classroom environment. It is also recommended to incorporate targeted interventions to enhance self-concept for earlier ages as it may be less effective in late adolescence.

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